

NAVY MEDICINE

May-June 1998



**Hospital
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**A
Century
of
Tradition,
Valor,
and
Sacrifice**

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COVER: Wearing his full field kit and toting a stretcher, a Navy hospital corpsman posed for his World War II portrait at the Medical Field Service School, Camp Lejeune, NC. Story begins on page 12. The Abbott Collection, Naval Historical Center.



First Fleet Hospital Training Set At Naval Hospital Camp Lejeune

CAPT Don Arthur, MC, USN

Naval Hospital Camp Lejeune, NC, is one of six military medical treatment facilities whose primary mission is direct support to a fleet hospital. Fleet hospitals are primarily tasked with providing comprehensive medical support in the combat zone to the fleet and the Fleet Marine Forces engaged in combat. They complement and expand existent afloat medical capabilities of the fleet and play a critical role

in the Navy's doctrinal concept of overseas theater support. Designed to provide definitive care to maximize return to duty of combat personnel, these hospitals can be deployed and assembled in any global location or climate and be essentially self-supporting for 60 days.

A secondary mission has recently emerged. By tailoring the size and configuration, a small modular fleet

hospital subset called a Navy Expeditionary Medical Support System (NEMSS) can be deployed in support of peacetime military missions, low intensity conflicts, disaster relief, and other humanitarian actions. These highly mobile facilities are configured to meet the needs of the expected mission and are better suited to humanitarian care than casualty resuscitation and injury treatment.

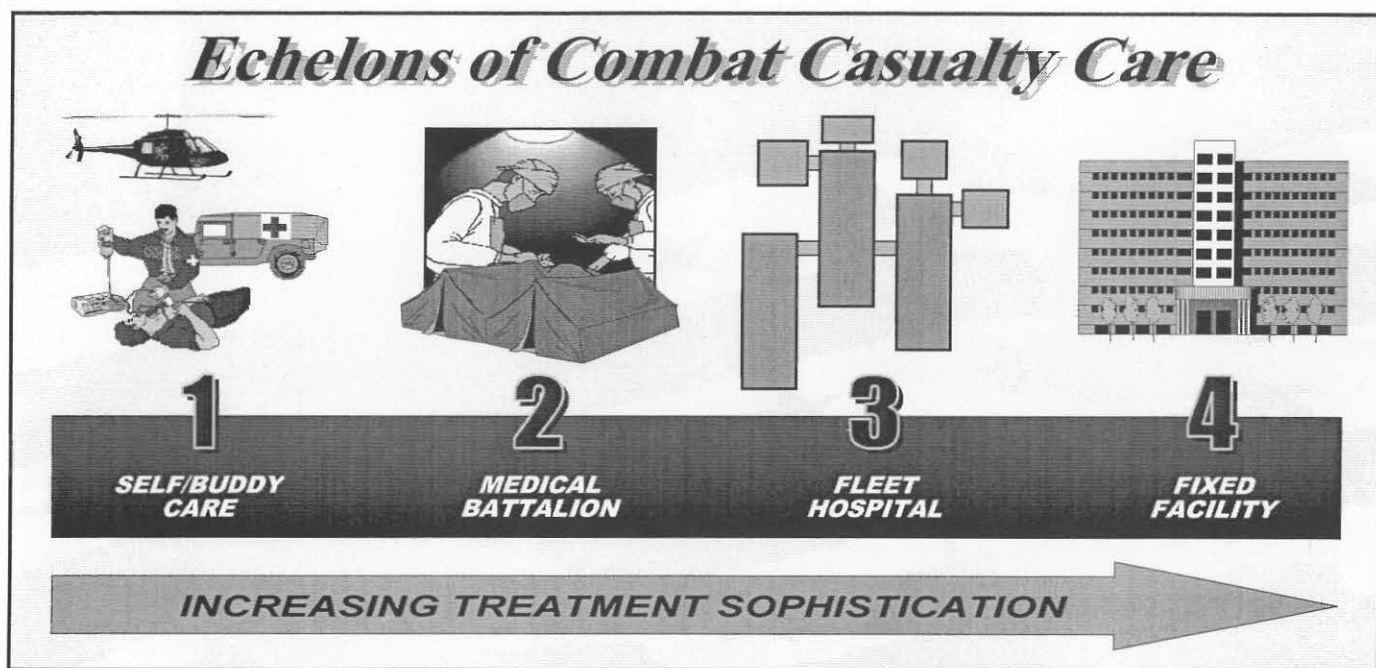


Figure 1

Concept of Operations

Battlefield care is traditionally described using "echelons" of care (see Figure 1). The first and most basic level is self or buddy aid in the field. Second echelon care, provided to Marines in the field by their medical battalions, is resuscitative in nature and meant to stabilize the casualty until transported to more definitive care.

At an echelon III facility such as a fleet hospital, definitive care can be provided, returning Marines to combat duty without ever leaving the combat zone. Other echelon III facilities in the combat zone include the hospital ships (TAH) and casualty receiving and treatment ships (CRTS). For those whose injuries are too severe to anticipate immediate return to duty, their care can be continued at an echelon IV (overseas fixed medical facilities) or echelon V (CONUS) medical treatment facility.

Fleet Hospital Camp Lejeune is typical of other 500-bed facilities. It is composed of 430 tent sections and

occupies 22 acres. It takes an entire container ship to transport its 500 ISO containers weighing over 17,000 tons. When fully operational, 75,000 gallons of water and 8,500 gallons of fuel are consumed each day! As these supplies are consumed, they generate 75,000 gallons of sewage, 18,000 pounds of trash, and 1,000 pounds of medical waste each day! That is quite a challenge for our engineers.

The staff of nearly one thousand is composed of 738 medical personnel and 240 nonmedical staff, including many members of the assigned Construction Battalion (Seabees). Only 435 of these staff, including the core staff and command elements, are stationed at Naval Hospital Camp Lejeune. The remaining staff are stationed at 10 other facilities.

Naval Hospital Camp Lejeune is not designed to support all medical specialties required by a fully functional fleet hospital, lacking, for example, emergency and family medicine specialists, neurosurgeons, plastic surgeons, car-

diothoracic surgeons, oral surgeons, critical care nurses, and many technician ratings. Several nonmedical officer specialties and enlisted ratings must also be acquired from other commands.

Traditional Training

Training fleet hospital personnel is a challenge. The Fleet Hospital Operations and Training Command (FHOTC) has primary responsibility for ensuring training through a two-phased training plan. Phase I training (which all staff must complete) provides classroom instruction in fleet hospital concepts of operation. Topics include the Law of Armed Conflict, fleet hospital mission and capabilities, casualty triage and patient flow, field assembly, communications, sanitation, security, and aeromedical evacuation.

Phase II training is field-based and provides a realistic representation of the operational milieu. On completion of this training, staff are able to configure, assemble, and disassemble a fleet

hospital facility, demonstrate safety and security procedures, establish and operate a functional facility, and provide medical care and base support functions during a simulated (and very realistic) casualty exercise.

New Training Concept

During Desert Shield/Storm and every fleet hospital deployment in recent history, the same "Lesson Learned" has been echoed: the staff were not adequately familiar with the medical equipment in these field facilities. Unlike the equipment found in most fixed hospitals, field equipment is more austere and compact, occasionally lacking some convenience features. Most hospital-based medical equipment is so specialized in design that intensive training is needed to use it effectively. The same is true of the equipment in the fleet hospital inventory.

Phase I and Phase II training prepares the staff to effectively set up a field facility and perform the functions tested by the casualty exercise. However, since medical equipment familiarization is not part of this traditional training, another training medium has been designed.

The new Fleet Hospital Training Set is the response to this need. This 100-bed fleet hospital facility, constructed on the grounds of the Naval Hospital, will be fully fitted with all the medical supplies and equipment used during deployments. The Deployable Medical Systems (DEPMEDS) equipment is not only used by fleet hospitals but also by the medical battalions and many echelon II and III Army and Air Force field medical platforms. They all can benefit from the training offered here.

Each clinical and support area will be fully functional, including an operating room, surgical ward and recovery area, full radiology and laboratory services, blood bank, pharmacy, and many

other services. The facility will be self-sufficient, with its own water, sewer, and power-generating facilities.

Training Objectives

We will train our staff as well as the staff of other commands which support fleet hospital platforms. Camp Lejeune's fleet hospital will be staffed by medical and other personnel from this and 10 other military treatment facilities. Regardless of the location of their parent command, they will all need training on this equipment and in a field environment.

Fleet hospital clinical services include those listed in Figure 2. Each of these specialty areas has its own training requirements. In contrast to fixed facility operation, one of the fleet hospital training challenges is to use the same or similar equipment for several specialties. This creates an additional requirement to have the right equipment available when needed. Equipment familiarity and competence is the goal of training. Curricula are being developed by our reserve and active duty education specialists to standardize the training in each area. These curricula will be exported to other training sets as they are developed.

Training will involve actual patient care, including casualty management, as part of ongoing military exercises. Several exercises are already scheduled with local Marine Corps and Army units. Field units will funnel "casualties" who have already received echelon I or II field management. They will be treated and medically regulated through the fleet hospital training facility—just as they would in combat. As the Marines do so well, we will train as we fight.

The Facility

The various components of the training facility are depicted in Figure 3. The layout has been carefully designed to

Fleet Hospital Clinical Services

Critical Care Medicine
Clinical Pharmacology
Dermatology
Emergency Medicine
Environmental Health
Family Medicine
General Dentistry
General Surgery
Internal Medicine
Neurology
Neurosurgery
Nursing Specialties
Nursing Specialties
Nutrition Management
Obstetrics & Gynecology
Ophthalmology
Optometry
Oral Surgery
Orthopedic Surgery
Otolaryngology
Pediatrics
Physical Therapy
Plastic Surgery
Podiatry
Preventive Medicine
Psychiatry
Psychology
Urology

Figure 2

mirror an operational setting and to facilitate training and patient flow since the facility will be used for actual patient care. The casualty receiving area in the right tent section will be the most frequently used patient access point. Since orthopedic injuries will be most common, a special orthopedic treatment area has been established adjacent to the casualty receiving area. Laboratory and X-ray services are lo-

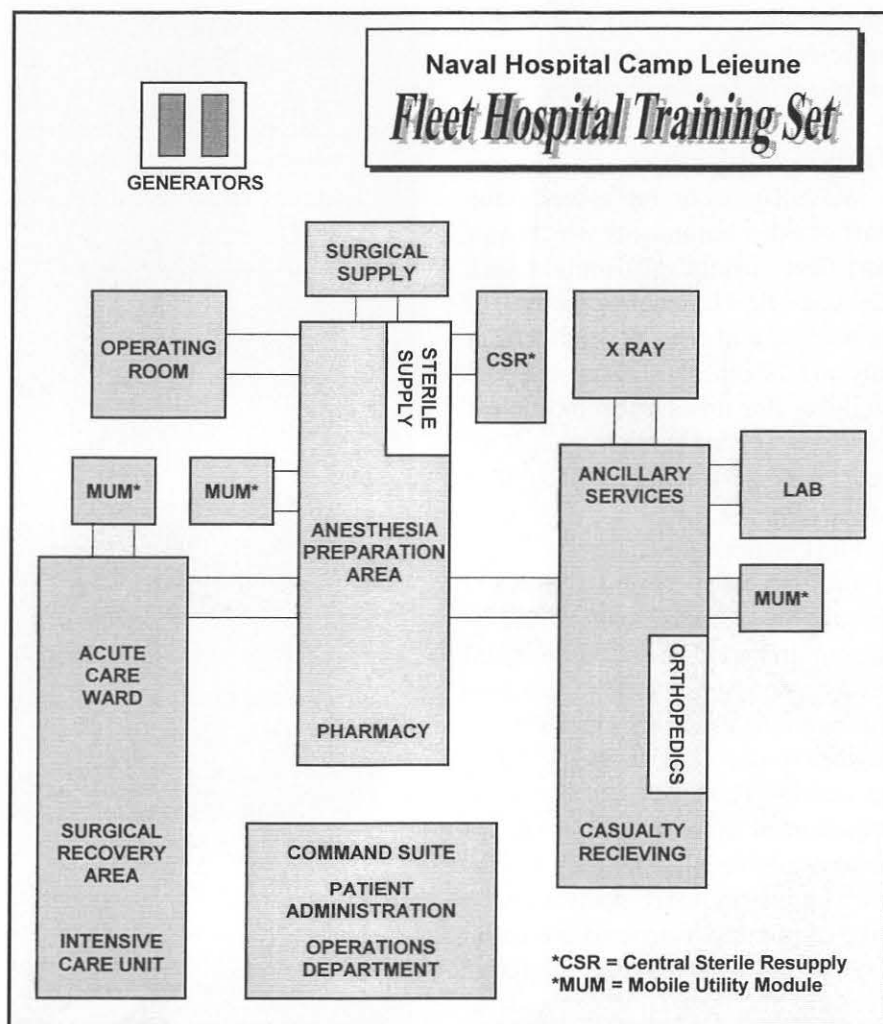


Figure 3

cated next along the treatment continuum to provide a smooth path for evaluation of patients bound for the surgical suite.

Surgical patients then transition to the center tent section where they can be prepared for surgery in the anesthesia preparation area. The operating room (surgical suite) is separated from the tent sections in a specially designed expandable container in which surgical sterility can be ensured. Surgical supplies and sterilization equipment are located nearby.

The pharmacy area conveniently dispenses surgical premedication as well as postoperative medication as the

patient moves to the recovery ward after surgery. Postoperative patients are moved through the acute care ward to the nearby surgical recovery area and intensive care unit. These specialized critical care areas are located at the end of the left tent section to eliminate traffic in the most clinically demanding portion of the clinical continuum. Once patients have been stabilized or recovered from surgery, they can be easily moved to the acute care ward where they will normally remain until discharged or transported elsewhere for further care.

Mobile Utility Modules (MUMs) are located adjacent to each major tent

section. These provide general utility functions for the staff, including toilet, shower, and other personal hygiene facilities. Not depicted in the diagram are the maze of power, sewer, and water lines running above and below ground supplying the vital utilities which bring life to this facility.

The choice of location was quite intentional. The proximity to the fixed military treatment facility (just a hundred yards from the emergency department) was chosen to be most convenient for hospital staff to maximize training opportunities, as well as expedite maintenance and repair of the equipment and tentage, and simplify patient flow. Readiness is our primary mission.

Reserve Integration

We are fortunate to have many affiliated reserve units with extensive experience in fleet hospital operations, including Desert Shield/Storm deployment. Reserve personnel of all officer corps and enlisted ratings will have assigned duties with the Fleet Hospital Training Set, including initial set up and curriculum development, as well as ongoing training.

Special Thanks to . . .

The concept of a Fleet Hospital Training Set was born in the minds of those who care about our readiness and who take seriously the lessons of those who have struggled with an imperfect system. These include RADM Harold (Ed) Phillips (N-931), RADM Joan Engel (MED-02), RADM William Snell (MED-05), and CAPT Gerald Baker (MED-56). Their vision, perseverance, and attention to detail have converted an ambitious concept into reality! □

Dr. Arthur is Commanding Officer, Naval Hospital Camp Lejeune, NC.

Hardwiring Navy Medicine for *Readiness*

LCDR Kevin Magnusson, MSC, USN

Navy medicine's Readiness Realignment has presented numerous challenges. Many of these involve Navy manpower and personnel systems. These systems are used to provide personnel orders and derive training, promotion, and accession plans. Navy systems, such as the Total Force Manpower Management System (TFMMS), are critical budgeting tools. They are the official source for billet and personnel information. To complete our reengineering journey, these information systems must work for us and not against us.

The Critical Question: How do we use current systems to support readiness reengineering? The Answer: component Unit Identification Codes (UICs).

Before we begin, let me provide you some very basic definitions (the more detailed, "official" OPNAVINST 1000.16 series definitions are at the end

of the article). A UIC identifies an element or *component* of a command, an Activity Code groups UICs into a command, and a Billet Sequence Code (BSC) identifies where within the structure of the command (i.e., directorate, department, division) a billet is located. The UIC/BSC combination identifies the exact billet detailers write orders against.

Component UICs are not new—we use them all the time. To illustrate, let's look at an officer and an enlisted billet at BRMCL NAS Miramar:

Command Title	Acty Code	UIC	BSC	Billet Title
NMC San Diego, CA	4170003100	00259		
BRMCL NAS Miramar, CA	4170003150	32547	90400	Pharmacist
			90420	Surface Force IDC

A pharmacist filling the BRMCL NAS Miramar billet would be ordered into UIC 32547 against BSC 90400. The Activity Code tells us that BRMCL NAS Miramar is a component of its parent, NMC San Diego.

This is how things have worked in the past. Now let's get an understanding of how things are going to work in the future—how Navy medicine will be "hardwired" to meet the readiness mission.

The Total Health Care Support Readiness Requirements (THCSRR) model identifies mobilization requirements. At present, personnel are assigned to meet platform requirements using the Standard Personnel Management System (SPMS). Unfortunately, SPMS is a Navy medicine system and does not interface with other Navy manpower or personnel systems: it is invisible to the fleet and Fleet Marine Force (FMF). There is no link between the active duty billet and

the mobilization requirement within TFMMS or any other Navy system. The link SPMS creates is tenuous and can be broken at any point along the chain. Further complicating matters, an individual's mobilization platform may change a number of times during a tour, and personnel assigned to a platform can come from geographically separate commands.

Component UICs are now being used to forge a new visible link throughout the Navy and Marine Corps. A component UIC is established for each platform the command supports. Personnel are assigned a mobilization platform when they receive Permanent Change of Station (PCS) orders. They remain on that platform until their next PCS.

Using the earlier example again, and adjusting things for our new way of doing things:

Command Title	Acty Code	UIC	BSC	Billet Title
NMC San Diego, CA USNS <i>Mercy</i>	4170003100	00259		
NMC San Diego DET 1st FSSG	4170003117	48462	34010	Pharmacist
NMC San Diego DET	4170003118	40209	03270	Surface Force IDC

We now have two component UICs of NMC San Diego. Both the Pharmacist and the Surface Force IDC would report to NMC San Diego for duty with their mobilization assignment already made. The BSC within the component UIC tracks directly to a BSC on the platform. The platform BSC indicates individual job and department assignment. Although BRMCL NAS Miramar no longer appears as a distinct UIC, both the Pharmacist and the IDC would be assigned by the command to work at the Branch Clinic in Miramar on a day-to-day basis to cover the continuing requirement for medical care at that site.

NMC San Diego (*Mercy* Detachment) is the first command to implement this new process. A number of good things are happening:

1. Our readiness mission is visible.
2. New personnel receive platform-specific training before their hospital assignment. SPMS took as long as 3 months to make platform assignments, when work schedules made training difficult.
3. Mobilization position requirements are clear, and facility assignment can be made accordingly.
4. Platform unit integrity is assured. Personnel in support of a platform are located at a single command as much as possible. The platform works and trains together on a daily basis.
5. Long-term assignment to a platform is assured. BUPERS makes the platform assignment, and any platform movement requires BUPERS PCS orders.
6. Readiness customers are more informed. Fleet CINCs can use Navy manpower/personnel systems to view platform composition and will know what assets are available upon mobilization.

Shifting to this new system has hit some snags. NMC San Diego is our alpha test. We are learning from our mistakes. We have not encountered anything we

can't overcome. All systems are go. We have taken the first steps and will begin the giant leaps necessary: Navy medicine *will be* realigned to meet the readiness mission.

OPNAVINST 1000.16 series definitions:

Unit Identification Code (UIC): "A five position numeric or alpha-numeric code assigned by the Comptroller of the Navy to... shore activities, divisions of shore activities, commands, bureaus and offices,... and in some instances to functions or the specialized elements for identification. By use of this code, programming decisions can be related to organizational units and to commands, bureaus and offices responsible for administering funds affecting those units."

Billet Sequence Code (BSC): "A 5-digit number assigned to... organizationally structured billets (manpower authorization)... used to sequence entries and to administratively identify the specific billet..."

Activity Code: "A 10-digit number identifying each activity in the Manpower, Personnel and Training Information System (MAPTIS)." The first eight digits identify what type of command it is. Every element of a command that has its own UIC shares these first eight digits. The last two digits identify "parent/child" relationships between UICs. 00 identifies the "parent," 01 through 99 identify the "children" or *components* of the parent. □

LCDR Magnusson is Head, Total Force Manpower (MED-15), Manpower Division, Bureau of Medicine and Surgery, Washington, DC.

What About the Dollars?

LCDR Antoinette Whitmeyer, MSC, USN

The Financial Tiger Team (FTT) was created as part of the Readiness Reengineering Task Force (RRTF) to look at the financial aspects of the Readiness Reengineering Plan. We began by identifying three goals: (1) analyze the impact of reducing end strength and associated facilities to the minimum readiness requirement, (2) identify potential mission or functional areas for product line analysis, and (3) ensure readiness reengineering costs are identified and incorporated into future program and budget submissions. Below is a description of how we have gone about accomplishing these goals, and our relationship to other RRTF tiger team efforts.

Goal No. 1

The Total Health Care Support Readiness Requirement (THCSRR) model identifies the minimum number of people we need to have in Navy medicine to meet readiness requirements. The model has determined 85 percent of the billets we are projected to have in FY 2003 are *required* for us to meet our readiness mission, and the remaining 15 percent are in excess of the *minimum* readiness requirement.

The FTT's first goal was conducting an analysis to answer the question a lot of people were asking: What is the impact of reducing Navy medicine's end strength by 15 percent—cutting all of those billets not required for readi-

ness? We finished the analysis in January 1998. Our approach considered access to and quality of care, political impacts, and cost. A lot of people contributed to the study: staff from field activities, BUMED, and OPNAV. It took us 3 months, and I would like to thank everyone for their hard work.

The analysis showed a small savings could be achieved by making reductions in Navy medicine's medical and dental infrastructure, but . . . these savings would be more than offset by shifting health care costs to our beneficiaries: they would pick up the additional copayments and deductibles from having to receive their health care from a civilian rather than military source. Additionally, the "apparent" savings would be reduced or eliminated if Navy were unable to "unload" the facilities used in the analysis. For example, the savings from closing a hospital would be much less if we still had to pay for the maintenance of the building.

We briefed our findings to the Navy Review Board (NRB) in January. This board is responsible for making "big picture" resource decisions. They understood the implications of the analysis. Savings from reducing end strength and eliminating medical and dental facilities would not come back to the Department of the Navy, but would go to the Defense Health Program. These "apparent" savings would be small because they are "net" and not "gross";

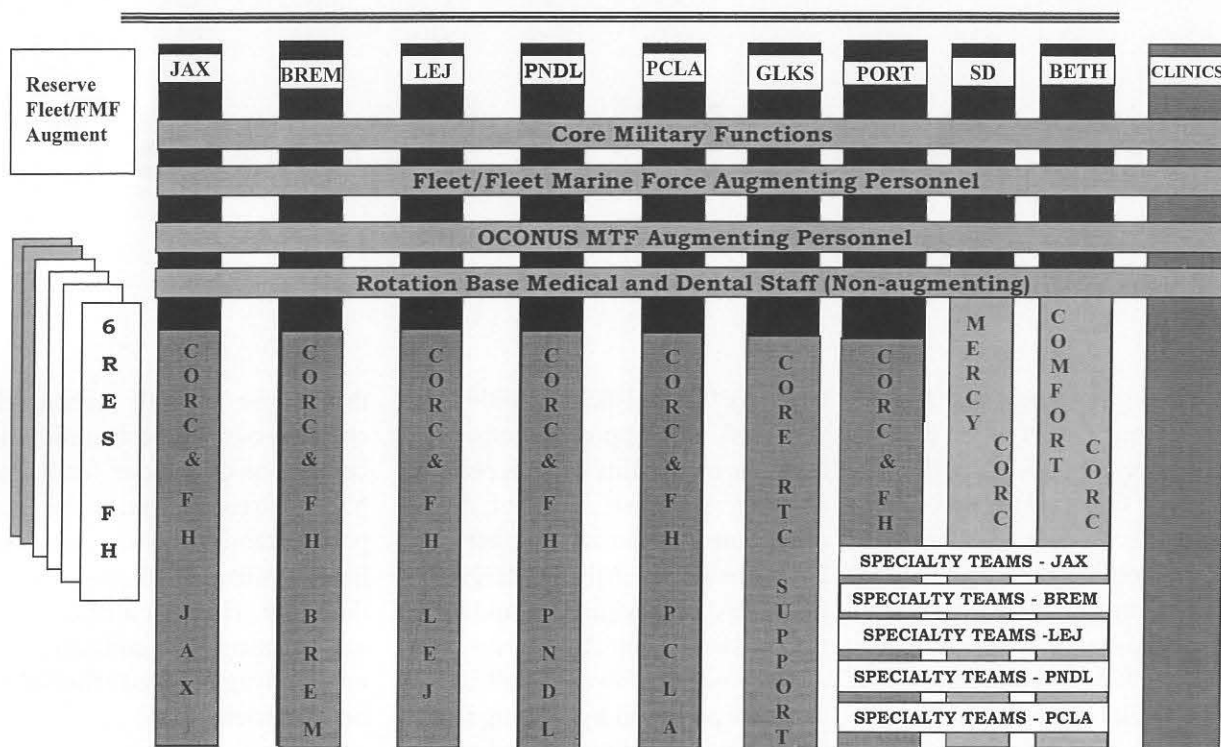
that is, we are still responsible for ensuring our eligible beneficiaries get care, in or out of our facilities. The NRB also recognized the tremendous political ramifications: people don't like having military medical services cut in their city. They decided end strength and infrastructure reductions would not be advantageous to the Navy or its beneficiaries.

Goal No. 2

The THCSRR model developed the readiness missions of our platforms and then rearranged billets so that, where possible, all people assigned to a platform work at the same facility. The platform team is much more effective if they work and train together daily. This arrangement of people and platforms is referred to as the infamous "galactic radiator" model (see chart), which aligns augmentation readiness platforms to specific UICs. The Operations Tiger Team is now working on the next step: a direct link between what a billet does in peacetime and what that same billet does on the operational platform it supports during a mobilization. (See "Hardwiring Navy Medicine for Readiness," this issue.)

Most billet "rearranging" can be done within the current peacetime billet structure. However, we need some additional end strength to "round out" the component UIC alignments and give us some flexibility in the alignment

Readiness Re-alignment Plan: *Unit Training*



process. This requirement led to our next FTT goal.

Goal No. 2, identifying potential mission or functional areas for product line analysis, is currently in progress. We are looking at end strength above the readiness level the THCSRR model identified to determine if certain missions or functions can be accomplished more efficiently. Goal No. 2 recognizes we will not be getting additional funding; if we want to start something new, we have to find the resources within our current budget. Navy medicine must continue to identify efficiencies in health care delivery to give us the resources we need to meet our readiness vision. The resources we need to support our readiness training requirements have to come from our existing program. This includes resources to fund new readiness training requirements and pay for additional health care services from the Managed Care

Support Contractors while our personnel train for readiness.

The FTT's efforts will focus on corporate-wide opportunities for product line analysis. When the component UIC mapping is complete, activities will know which services they provide using that 15 percent end strength not required for readiness (above-THCSRR requirements), and they can conduct their own studies to find the most cost-effective ways of providing care.

Goal No. 3

Navy medicine's readiness vision requires that the *right* people (THCSRR) also have the *right* training and the *right* equipment. Our third goal will ensure we know what our readiness reengineering costs are and we include those costs in future program and budget submissions.

When the component UIC mapping is complete, we will make billet-spe-

cific individual training plans that reflect operational mission requirements. CDR Walt Tinling described what the Training and Education Tiger Team is doing to further this effort in the March/April *Navy Medicine* edition.

The Naval Health Services Doctrine Board (NHSDB) and Deployable Medical Platforms Advisory Council (DMPAC) are examining our Deployable Medical Systems (DEPMEDS) and other platform capabilities; the FTT will ensure these programs are adequately resourced. Goal No. 3 will be ongoing as new requirements emerge and are incorporated into Navy medicine's readiness plan.

Readiness reengineering isn't about "doing more with less." More isn't the objective; readiness is. □

LCDR Whitmeyer is a Resource Programming Manager on the OPNAV staff (N-931).

Convalescent Leave Guidelines: Successful Application in General Surgery

CDR Hans A. Brings, MC, USN
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CDR John A. Perciballi, MC, USN
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LCDR James P. Flint, MC, USNR
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Recommendations for amounts of convalescent leave to be granted to postoperative patients can vary widely among individual surgeons. This is especially the case in training programs such as ours where rotating housestaff, often unfamiliar with expected postoperative convalescence, are writing discharge orders. This inconsistency may lead to confusion for patients and their commands. It can also potentially lead to excessive lost workdays. Official naval instructions offer only general guidance as to amounts of convalescent leave to be granted in various

circumstances.^(1,2) The following quote from the *Naval Military Personnel Manual* is representative:

When considered necessary by the attending physician convalescent leave may be granted to members on active duty by the member's commanding officer or the hospital's commanding officer for a period of up to 30 days per period of hospitalization. . . .

Care shall be exercised in granting convalescent leave to limit the duration of such leave to that which is essential in relation to diagnosis, prognosis, estimated duration of treatment, and probable final disposition of the patient. Care should be exercised to keep convalescent leave to the minimum amounts required to enable recuperation. The medical treatment facility commanding officer may extend convalescent leave beyond the above time frames if the member's parent command concurs.⁽¹⁾

The Naval Medical Command instruction offers similar guidance.⁽²⁾ In an effort to provide more uniform convalescent leave recommendations to our active duty patients and their commands, in August 1996 our general surgery department developed a set of guidelines for amounts of convalescent leave to be granted following various operations (Table 1). The amount of convalescent leave recommended could be modified at the discretion of the surgeon. The guidelines were then widely distributed among our housestaff. After 1 year we reviewed

Table 1. Convalescent leave guidelines for selected procedures instituted by our general surgery department in August 1996.

CONVALESCENT LEAVE GUIDELINES	
In order to provide more uniform convalescent leave recommendations to our active duty patients and their commands, the following guidelines for length of convalescent leave are proposed. These are only guidelines and may be modified at the discretion of the attending surgeon. At present the maximal allowed convalescent leave is 30 days. If a longer convalescent period is anticipated consideration should be given to dictating a limited duty board. Keep in mind that patients may return to work on light duty status in many cases.	
<u>PROCEDURE</u>	<u># DAYS CON LEAVE</u>
Breast Biopsy	3
I&D Breast Abscess	7
Appendectomy, laparoscopic	7
Appendectomy, open, uncomplicated	14
Diagnostic laparoscopy	7
Cholecystectomy, laparoscopic	14
Cholecystectomy, open	30
Nissen Fundoplication, laparoscopic	14
Exploratory Laparotomy	30
Other major abdominal surgery	30
Inguinal hernia repair, laparoscopic	7
Inguinal hernia repair, anterior with mesh	14
Incisional hernia, with mesh	14
Incisional hernia, without mesh	14
Umbilical hernia repair	7
Hemorrhoidectomy	14
Pilonidal cystectomy	14
Anal fistulotomy	14
I&D perirectal abscess	7
Thoracoscopic procedure	14
Thoracotomy	30
Thyroidectomy	21
Vein stripping/Varicose vein ligation	7
Reduction Mammoplasty	14
Gynecomastia	4

the results of this trial and noted that there had been no significant problems or complaints from patients, surgeons, or commands. We also noted a substantial savings in lost workdays compared to the year prior to the institution of the guidelines. In addition, we noted that several other surgical departments at our hospital had expressed an interest in developing similar guidelines for their own use.

From September 1995 through August 1996 a total of 187 general surgery procedures were performed on active duty members. Of these, 32 were unlisted procedures outside of the study

design. In another 20 cases no documentation of the amount of convalescent leave granted could be found. Of the remaining 135 cases, it is calculated that if our convalescent leave guidelines had been adhered to during that 12-month time frame as many as 255 workdays could potentially have been saved (Table 2). If the recommended amount of convalescent leave had been granted in all 135 cases, including those that had been given less than the amount recommended in the guideline, 116 workdays would have been saved.

As can be seen in Table 2, the greatest numbers of days saved would

have occurred in those procedures which are performed most frequently, namely, hernia repairs, appendectomies, hemorrhoidectomies, and breast biopsies. An interesting finding is that for many procedures the average number of convalescent leave days granted was often very close to or less than the amount recommended in our guidelines while the range of days granted was usually quite wide. In some cases the amount of leave granted appears to have been too short, such as in the case of a reduction mammoplasty patient who received only 5 days convalescent leave. It would be interesting to know how many of these patients required additional convalescent leave; unfortunately we do not have this data.

During the year from September 1996 through August 1997, a total of 173 general surgery operations were performed on active duty patients. Records of these cases were reviewed retrospectively. Twenty-seven unlisted procedures were performed. In another nine cases the amount of convalescent leave granted could not be ascertained. In the remaining 137 listed procedures 103 (75 percent) adhered to the convalescent leave guidelines. This shows that acceptance of the program and compliance with the guidelines was generally high. In the 34 cases where the amount of convalescent leave granted differed from the guidelines, 10 (29 percent) received less than the recommended amount and 24 (61 percent) exceeded the recommended amount. In many of the cases where

Table 2. Analysis of convalescent leave granted for studied procedures during the 12-month period (September through August 1996) prior to the use of standard guidelines.

PROCEDURE	TOTAL DAYS CON-LEAVE	# PROCEDURES 95-96	AVE. # DAYS C-LEAVE PER PROCEDURE WITH RANGE(*)	# DAYS RECOMMENDED / PROCEDURE	POTENTIAL # OF DAYS SAVED (++)
HERNIA-OPEN	627	40	15.68 (R=10-31)	14	64
HERNIA-LAP	42	3	14.00 (R=14)	7	35
CHOLECYSTECTOMY-OPEN	60	2	30.00 (R=30)	30	0
CHOLECYSTECTOMY-LAP	122	9	13.56 (R=7-21)	14	9
APPENDECTOMY-OPEN	192	12	23.58 (R=10-24)	14	28
APPENDECTOMY-LAP	27	3	9.00 (R=7-10)	7	6
EXPLORATORY LAPOROTOMY	21	1	21.00 (R=21)	30	0
PILONIDAL CYSTECTOMY	84	6	14.00 (R=7-21)	14	7
HEMORRHOIDECTOMY	115	7	16.43 (R=7-21)	14	28
ANAL FISTULOTOMY	42	3	14.00 (R=14)	14	0
I&D PERIRECTAL ABSCESS	14	2	7.00 (R=7)	7	0
NISSAN FUNDOPLICATION-LAP	34	3	11.33 (R=6-14)	14	0
BREAST BIOPSY	64	15	4.27 (R=1-14)	3	24
I&D BREAST ABSCESS	7	1	7.00 (R=7)	7	0
REDUCTION MAMMOPLASTY	244	17	14.35 (R=5-25)	14	26
GYNECOMASTIA	4	1	4.00 (R=4)	4	0
VARICOSE VEIN STRIPPING	10	1	10.00 (R=10)	7	3
THORACOSCOPIC PROCEDURES	31	2	15.50 (R=10-21)	14	7
THORACOTOMY	14	1	14.00 (R=14)	30	0
THYROIDECTOMY	80	4	20.00 (R=6-30)	21	18
MAJOR ABDOMINAL SURGERY	51	2	25.50 (R=21-30)	30	0
TOTAL	1885 DAYS	135			255

*Average number and range of convalescent leave days granted prior to the use of guidelines.

++Numbers of workdays that could potentially have been saved for various procedures if the convalescent leave guidelines had been applied during the period September 1995 through August 1996.

LAP=laparoscopic

I&D=incision and drainage

additional leave time was granted there were extenuating circumstances such as extremely rigorous duties or complications which made a longer convalescent period appropriate.

It should be noted that at the end of the 12-month trial period we re-evaluated our convalescent leave guidelines and concluded that we had perhaps been too generous in granting 21 days convalescent leave following thyroid surgery and will probably reduce this to 7-14 days in the future. For this reason, we recommend that if guidelines are used, they be reviewed periodically.

To conclude, we have been satisfied with the acceptance and successful use of convalescent leave guidelines in our general surgery department. We believe the application of these guidelines has aided patients and their commands in planning for surgery and the subsequent convalescent period and has reduced confusion and inconsistency in granting convalescent leave. We have also seen a significant savings in the number of lost workdays following elective surgery. We have been pleased to see that our work has sparked interest among the other surgical specialists in developing guidelines for their own

use. We suggest that all surgical departments evaluate the possibility of developing similar convalescent leave guidelines and review them periodically in anticipation of the benefits we have demonstrated.

References

1. *Naval Military Personnel Manual*, Article 3860280.
2. NAVMEDCOMINST 6320.3B, 14 May 1987. □

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The U.S. Navy Hospital Corps: A Century of Tradition, Valor, and Sacrifice

HMCS(FMF) Mark T. Hacala, USNR

Few military organizations can look upon their histories with the same degree of pride and, in some cases, awe as can members of the Navy Hospital Corps. In its century of service, the Hospital Corps has proven itself ready to support Marines and Sailors by giving them aid whenever and wherever necessary. As the years have progressed, the tools and techniques used by hospital corpsmen and their forerunners have evolved, but the level of dedication has remained a strong current running through the corps' history.

Revolutionary War

The first direction given to the organization of Navy medicine consisted of only one article in the *Rules for the Regulation of the Navy of the United Colonies of North America of 1775*. Article 16 stated:

"A convenient place shall be set apart for sick or hurt men, to be removed with their hammocks and bedding when the surgeon shall advise the same to be necessary: and some of the crew shall be appointed to attend to and serve them and to keep the place clean. The cooper shall make buckets with covers and cradles if necessary for their use."⁽¹⁾

Interestingly, the cooper or barrel-maker, whose skills could be used to make bedpans, had a more detailed job description than did any kind of trained medical assistant. A typical medical section was usually limited to two, perhaps three men: the surgeon, the surgeon's mate, and possibly an enlisted man. The surgeon was a physician. The surgeon's mate, usually a doctor as well, held status like that of a modern warrant officer but signed only for a particular cruise. Although usually viewed within the history of the Medical Corps, surgeon's mates' position and responsibilities appear more to be equivalents to senior hospital corpsmen.

Few things changed in medical techniques and organization between 1775 and 1814, the period covering America's first naval wars. Among the less dramatic responsibilities of caring for the noncombat ill and injured was feeding and personal care of the sick. The simple daily ration of porridge or "loblolly" was sure to be carried down to those in the medical space by untrained attendants.

Surgeon's Mate and Loblolly Boy

Congress approved an act on 2 Mar 1799 which copied the words of the Continental Congress's Medical Department Article 16 of 1775 exactly.⁽²⁾ As a result, there was still no title or job description for enlisted medical personnel. The nickname "loblolly boy" was in common use for so many years that it became the official title in Navy Regulations of 1814. The loblolly boy's job, described in the regulations of 1818,⁽³⁾ included the following:

The surgeon shall be allowed a faithful attendant to issue, under his direction, all supplies and provisions and hospital stores, and to attend the preparation of nourishment for the sick.

The surgeon's mates shall be particularly careful in directing the loblolly boy to keep the cockpit clean, and every article therein belonging to the Medical Department.

The surgeon shall prescribe for casual cases on the gun deck every morning at 9 o'clock, due notice having been previously given by his loblolly boy by ringing of a bell.⁽⁴⁾

The U.S. Navy's first loblolly boy of record was John Wall, who signed aboard USS *Constellation* on 1 June

1798. The ship sailed with a surgeon, George Balfour, and a surgeon's mate, Isaac Henry, as well. Eight months later, in February 1799, CAPT Thomas Truxton won a decisive victory against the French frigate *L'Insurgente* in the Caribbean. This would have been Loblolly Boy Wall's first opportunity to care for shipmates wounded in battle.(5)

Other loblolly boys who are documented in Navy records include Alexander Wood, who served aboard USS *Essex* in 1802 and John Dornyn aboard the frigate *Philadelphia* in 1803. Dornyn and the rest of the crew of *Philadelphia* were captured at Tripoli by Algerian pirates in October 1803 and remained captive until June 1805. Further, there was a 16-year-old loblolly boy, Joseph Anderson, aboard USS *Eagle*, about 1800. Anderson has the distinction of being the first known African-American loblolly boy.(6)

Surgeon's Steward and Loblolly Boy

A new, senior enlisted medical rate, surgeon's steward, was introduced in

the ensuing decades. The term is first seen in 1841 in Navy pay charts, but it appears that the new billet was only allowed on larger ships. By 1 April 1843, the Navy Department issued an order allowing surgeon's stewards to be assigned to brigs and schooners.(7) The relative importance of medical Sailors was hereby increased. Surgeon's stewards would rank second in seniority among the ship's petty officers, next only after the master-at-arms.

Herman Melville, famed author of *Moby Dick*, gives a description of the surgeon's steward aboard the frigate USS *United States* in *White Jacket*, his account of Navy life in 1843:

"An official, called the surgeon's steward, assisted by subordinates, presided over the place [sick bay]...He was always to be found at his post, by night and by day."(8)

Melville's detailed description of the ship's medical department notes that "Pills," the surgeon's steward's nickname, performed a variety of duties. He assisted in preparing and passing surgical instruments during an opera-

tion. He also ran the ship's apothecary shop, which he opened for an hour or so in the morning and in the evening. Melville remembered how he went to the steward several times when he felt a need for medicine, only to be given his freshly-ground, bitter-tasting powders in a plain tin cup. While he commented on the unpleasant taste and after-effects, Melville also noted that the position was free of charge.(9)

Surgeon's Steward and Nurse

The year 1861 brought a horrible civil war to this country and, with the massive increase in the Navy, changes and developments in the Medical Department were sure to ensue. On 19 June 1861, a Navy Department circular order established a new name for the loblolly boy.

"In addition to a surgeon's steward, 1 nurse would be allowed for ships with a complement of less than 200; 2 nurses would be allowed for ships with a complement of more than 200; and sufficient nurses would be allowed on receiving ships in a number proportionate to the necessities of the vessel."(10)

Hospital Corps Rates

1814-1861	1861-1870	1870-1898	1898-1916	1916-1948	1948-1958	1958-Present	
					Hospital Recruit	Hospital Recruit	E-1
Loblolly Boy	Nurse	Bayman	Hospital Apprentice	Hospital Apprentice, Second Class	Hospital Apprentice	Hospital Apprentice	E-2
				Hospital Apprentice, First Class	Hospitalman	Hospitalman	E-3
			Hospital Apprentice, First Class	Pharmacist's Mate, Third Class	Hospital Corpsman, Third Class	Hospital Corpsman, Third Class	E-4
				Pharmacist's Mate, Second Class	Hospital Corpsman, Second Class	Hospital Corpsman, Second Class	E-5
				Pharmacist's Mate, First Class	Hospital Corpsman, First Class	Hospital Corpsman, First Class	E-6
Surgeon's Steward (1841)	Apothecary (1866)	Apothecary	Hospital Steward	Chief Pharmacist's Mate	Chief Hospital Corpsman	Chief Hospital Corpsman	E-7
						Senior Chief Hospital Corpsman	E-8
						Master Chief Hospital Corpsman	E-9

Compiled by HMCS(FMF) Mark T. Hacala, USNR

HOSPITAL CORPS STRENGTH, 1898 - 1998

1898	*	1931.....4,047	1966.....28,343
1899	*	1932.....4,600	1967.....30,986
1900	*	1933.....3,951	1968.....31,977
1901	*	1934.....3,239	1969.....34,132
1902	*	1935.....3,321	1970.....31,523
1903	*	1936.....3,718	1971.....29,387
1904.....736		1937.....3,936	1972.....24,905
1905.....739		1938.....4,181	1973.....23,405
1906.....706		1939.....4,378	1974.....23,374
1907.....857		1940.....6,134	1975.....23,467
1908.....1,058		1941.....9,414	1976.....24,309
1909.....1,040		1942.....26,133	1977.....23,162
1910.....1,160		1943.....58,355	1978.....22,130
1911.....1,012		1944.....93,818	1979.....22,801
1912.....1,228		1945.....116,697	1980.....21,759
1913.....1,222		1946.....49,310	1981.....22,692
1914.....1,417		1947.....19,503	1982.....23,122
1915.....1,584		1948.....15,387	1983.....23,793
1916.....1,492		1949.....15,830	1984.....25,574
1917.....7,000		1950.....14,083	1985.....27,113
1918.....10,652		1951.....27,826	1986.....26,822
1919.....8,900		1952.....25,793	1987.....26,645
1920.....3,499		1953.....25,221	1988.....26,415
1921.....4,623		1954.....27,143	1989.....27,062
1922.....3,645		1955.....23,536	1990.....27,337
1923.....3,614		1956.....23,753	1991.....27,271
1924.....3,766		1957.....23,865	1992.....27,028
1925.....3,724		1958.....22,106	1993.....26,946
1926.....3,584		1959.....22,697	1994.....26,714
1927.....3,527		1960.....23,299	1995.....23,580
1928.....3,670		1961.....23,913	1996.....24,985
1929.....3,996		1962.....24,850	1997.....24,502
1930.....4,149		1963.....27,730	1998.....23,309
		1964.....27,416	
		1965.....25,882	

*Exact figures are unavailable for 1898-1903.

Hospital Corps strength originally included officers. The warrant rank of pharmacist was allowed in the 1898 law establishing the corps, and chief pharmacists (chief warrant officers) were included in 1912. During World War II, commissions in the Hospital Corps were authorized up to the rank of commander. Allied health and administrative officers joined the newly created Medical Service Corps on 4 Aug 1947. Women joined the Hospital Corps in 1942 as WAVES (Women's Reserve, USNR) and were allowed Regular Navy status in 1948. Dental technicians were specialists within the Hospital Corps until 2 April 1948, when the DT rating was established. Although a separate rating, dental technicians remained a part of the Hospital Corps through 30 May 1972. Naval Reserve hospital corpsmen augmented active personnel in significant numbers during World War II, Korea, and the Persian Gulf War. In 1990-91, for example, 7,000 recalled reservists added to the corps' strength.

Sources: *Hospital Corps Quarterly*, Vol. XXI, No. 2, April-May-June, 1948, p. 14; BUMED Archives; BUMED Medical Department Enlisted Personnel (MED-00HC); BUPERS Hospital Corpsman/Dental Technician Enlisted Community Manager (Pers-221O).
Compiled by HMCS(FMF) Mark T. Hacala, USNR

While the shipboard medical department may have only changed titles of personnel, new techniques in mass care of the sick and wounded were developed. A captured sidewheel steamer was repaired and modified to care for patients. Revisions to the ship were to include bathrooms, kitchens, laundries, even elevators and facilities to carry 300 tons of ice. On 26 Dec 1862, USS *Red Rover* became the first Navy vessel specifically commissioned as a hospital ship. The medical complement included 30 surgeons and male nurses, as well as 4 nuns.(11)

While the Civil War was often not as intense at sea services as it was for the Army, there were a number of terrible battles which necessitated a competent medical department.

PVT Charles Brother, a Marine stationed aboard ADM David Farragut's flagship USS *Hartford*, recalls such an account in his 1864 diary. After the admiral cursed the sea mines awaiting his fleet in Mobile Bay ("Damn the torpedoes!"), Farragut directed *Hartford* into the fight. Heavy Confederate fire from the Confederate ram *Tennessee* ensued. As would often be the case during combat action, Navy medical personnel risked becoming casualties from hostile fire. In their attempts to minister to battle casualties, medical personnel are themselves targets and sometimes do not even have the chance to render aid. PVT Brother noted:

The shell from the ram burst as it came through killing the Docts Stew'd [sic] instantly... Very few were slightly wounded, all were either killed instantly or horribly mangled. Our cockpit [sick bay] looked more like a slaughter house than any thing else.

ADM Farragut's after-action report listed a grisly count of 25 killed and 28 wounded on his ship.(12)

Apothecary and Bayman

Postwar reductions in the size of the Navy brought new classifications to enlisted medical personnel. The title surgeon's steward was abolished in favor of three grades of apothecaries in 1866. Those selected as apothecaries had to be graduates of a course in pharmacy, or to possess the knowledge by practical experience. The apothecary first class ranked with a warrant officer, while the second and third class were petty officer equivalents. The three rates were reduced to one petty officer apothecary on 15 Mar 1869.(13)

Nurse, as a title for junior enlisted medical personnel, was replaced by the title "bayman," one who manned the sick bay, in the early 1870's. U.S. Navy Regulations of 1876 used the title officially, and it remained valid for 22 more years.(14)

Charles Shaffer began a 50-year career in Navy medicine in 1897 as a bayman. His career path was typical for one enlisting in the medical field. Shaffer was required to enlist as a landsman (seaman apprentice), earning \$16 a month. It was not until transfer to his first command that Shaffer's rating was changed to bayman. And since the naval hospitals used civilian male nurses as opposed to baymen, Shaffer would go to a ship.(15)

With his new title, Bayman Shaffer's pay was upped to \$18 a month. His uniform now bore two strips of piping on the cuff and a "watch mark," a half-inch white stripe sewn around the shoulder seam of the blue jumper (blue-on-white uniforms) denoting him as deck force or nonengineering personnel. This stripe was worn on either the left or right shoulder seam, depending on whether the individual was assigned to the port or starboard watch. Prior to the establishment of the Hospital Corps,

no specific medical insignia was worn by junior personnel.(16)

Shaffer's senior counterpart, the apothecary, was wearing new insignia as well, that of the newly created (1893) chief petty officer. Its three chevrons and three arcs were surmounted by an eagle, and had a caduceus in the angle of the chevrons. An eagle whose wings extended horizontally surmounted the arcs. The rating badge described in the 1894 uniform regulations established the style which has continued, virtually unaltered, to the present day.(17)

An apothecary of the 1890's mixed and dispensed all medication aboard ship. He was responsible for all medical department reports, supply requests, and correspondence. The apothecary administered anesthesia during surgery and would be the primary instructor for new baymen. Some of the medical skills were easily learned, though. "As a rule, baymen became skillful at bandaging," Shaffer noted, "perhaps due to their previous training in seamanship."(18)

Their responsibilities did not end there, however. During shipboard surgery, the bayman focused an electric light on the incision site while the surgeon did his work on what was listed as the "combination writing and operating table." He sterilized surgical instruments by boiling, then stored them in a solution of 5 percent phenol. Bandages and dressings were sterilized by baking them in a coffee can in the ship's oven.

Sick bay itself was prepared for surgery by wiping the entire room down with "a weak bichloride solution." On days when the ship's routine called for scrubbing bags and hammocks, a bayman was responsible for washing those of the sick. He assisted in the maintenance of medical department records, and had to paint the

Class No. 2 of the Hospital Corps School of Instruction, Portsmouth, VA, in 1903.

ship's medical spaces when required.(19)

In the last two decades of the 1800's, many in the naval medical establishment called for reforms in the enlisted components of the Medical Department. Medicine had by now progressed far more as a science, and civilian hospitals all had teaching schools for their nurses. Foreign navies had trained medical Sailors, and the U.S. Army had established its own Hospital Corps of enlisted men on 1 Mar 1887. Navy Surgeon General J. R. Tryon argued, in his annual report of 1893, against the practice of assigning landsmen to the Medical Department with nothing more than on-the-job-training. He advocated the urgent need for an organized Hospital Corps.(20)

Physicians in the fleet were equally certain of the need for changes. Surgeon C. A. Sigfried of USS *Massachusetts* made his views known in his report to the Surgeon General in 1897.

The importance of improving the medical department of our naval service is more and more apparent, in view of the recent advances in the methods and rapidity of killing and wounding. The great want is a body of trained bay men or nurses, and these should be better paid and of better stamp and fiber. Now and then we procure a good man, and proceed with his training as a bay man. He soon finds opportunity for betterment in some one of the various departments of the ship, in the matter of pay and emolument, either in some yeoman's billet or in some place where his meager \$18 per month can be suddenly increased to \$30, \$40, or even \$60 per month. The bay man, who should be an intelligent, sober man, and well trained in many things pertaining to nursing, dieting, ambulance, and aids to wounded, and have a moderate amount of education, finds his pay at present among the lowest in the ship's company; even the men caring for storerooms get more per month.(21)



Hospital Corpsman: Hospital Steward and Hospital Apprentice

Arguments for a professional, well-trained group of individuals to provide medical care for the Navy finally paid off. Unfortunately, it took the imminent danger of combat in the Spanish-American War to spur Congress into action. Within a bill aimed at building the armed forces was a section to provide for the Navy's long-needed Hospital Corps. It was approved by President William McKinley on 17 June 1898. From that date to the present, either generically or by rating title, medical Sailors have been called "hospital corpsmen."

The corps would again change the rate titles. The hospital apprentice would be the equivalent of an apprentice seaman, the hospital apprentice first class was a third class petty officer, and the hospital steward was a chief petty officer. Pharmacists were warrant officers, the first of a line of commissioned hospital corpsmen that contin-

ued until the establishment of the Medical Service Corps following World War II.(22)

Early history of the corps sets a pace of conspicuous service and involvement that would continue to the present. Before there was even a Hospital Corps school, Hospital Apprentice Robert Stanley was serving with the U.S. contingent at Peking. Actions by a Chinese political group that was opposed to foreign presence in China, the so-called Boxers, prompted attacks on foreign embassies in July 1900. During this action, Hospital Apprentice Stanley volunteered for the dangerous mission of running message dispatches under fire. For his bravery, Stanley became the first in a long line of hospital corpsmen to receive the Medal of Honor.

In order to ensure that the members of the new Hospital Corps were adequately trained in the disciplines pertinent to both medicine and to the Navy, a basic school for corpsmen was established at U.S. Naval Hospital

Norfolk (Portsmouth), VA. Originally called the School of Instruction, it opened 2 Sept 1902. Its curriculum included anatomy and physiology, bandaging, nursing, first aid, pharmacy, clerical work, and military drill. The first class of 28 corpsmen was graduated on 15 Dec 1902. Hospital Apprentice Max Armstrong, at the top of the alphabetical list of graduates, was naturally given his diploma first and has been heralded as the Navy's first graduate hospital corpsman.(23)

The school continued for a brief time and was then moved to the Naval Hospital in Washington, DC, staying in existence there until 1911. For the next 3 years there was no basic school for corpsmen, but the concept was revived in 1914. The next two Hospital Corps Training Schools were opened in Newport, RI, and on Yerba Buena Island, CA.(24)

Development of the Navy's Hospital Corps training courses would prepare the first generation of hospital corpsmen for arduous duty, both in peace and war. A graduate of the Hospital Corps School's sixth class, Hospital Steward William Shacklette, would find himself aboard USS *Bennington* in San Diego harbor on 21 July 1905. When the ship's boiler exploded, Shacklette was burned along with almost half the crew; the other half were killed outright. He rescued and treated many of his shipmates and was awarded the Medal of Honor for his bravery. Another young corpsman, Hospital Apprentice First Class William Zuiderveld of Michigan, landed at Vera Cruz, Mexico, in 1914 as part of a force of Navy and Marine Corps personnel. During intense street fighting in which he was wounded himself, Zuiderveld, a graduate of the 16th class

of the School of Instruction, risked his life on several occasions to aid wounded shipmates. He, too, received the Medal of Honor.

Hospital Corps: Hospital Apprentices and Pharmacist's Mates

The next revision in the structure of the Hospital Corps would come by Act of Congress on 29 Aug 1916. Under this plan, the rates would be hospital apprentices, second and first class (both of whom wore a red cross on the sleeve), pharmacist's mates, third, second, and first class, and chief

pharmacist's mate. The officer contingent of the Hospital Corps would include the two warrant officer ranks of pharmacist and chief pharmacist.(25) The reorganization would allow for a massive increase, five-fold, in the size of the Hospital Corps.

At the start of 1917 the Hospital Corps counted 1,700 men in its ranks. A concerted effort to recruit and train new personnel enabled the corps to reach its authorized strength of 3 1/2 percent of the Navy and Marine Corps, or 6,000 men. But as these plans came to fruition, the United States entered

National Archives



Treating a wounded Marine in France, March 1918. Hospital corpsmen cared for over 13,000 casualties in World War I.

U.S. NAVY ENLISTED MEDICAL PERSONNEL KILLED IN ACTION

CIVIL WAR 1861-1865	
Surgeon's Steward.....	4
<u>Nurse.....</u>	<u>2</u>
	6

USS MAINE 1898	
Apothecary.....	1
<u>Bayman.....</u>	<u>2</u>
	3

WORLD WAR I 1917-1918	
HA-1.....	5
PhM-3.....	8
PhM-2.....	5
<u>PhM-1.....</u>	<u>2</u>
	20

NICARAGUA 1932	
PhM1c.....	1

WORLD WAR II 1941-1945	
HA2c.....	47
HA1c.....	223
PhM3c.....	339
PhM2c.....	296
PhM1c.....	171
<u>CPhM.....</u>	<u>94</u>
	1,170

KOREA 1950-1954	
HA.....	2
HN.....	48
DN.....	1
HM3.....	45
HM2.....	5
<u>HM1.....</u>	<u>7</u>
	108

DOMINICAN REPUBLIC 1965	
HM3.....	1

VIETNAM 1962-1975	
HA.....	4
HN.....	267
HM3.....	278
DT3.....	2
HM2.....	70
HM1.....	11
<u>HMC.....</u>	<u>6</u>
	638

BEIRUT 1983	
HN.....	3
HM3.....	5
HM2.....	5
HM1.....	1
<u>HMC.....</u>	<u>1</u>
	15

TOTAL:	1,962
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Compiled by HMCS(FMF) Mark T. Hacala, USNR, BUMED (MED-00HC)

Rates: **Surgeon's Steward** and **Apothecary** - Equivalent to modern CPO
Nurse and **Bayman** - Equivalent to modern HN/DN
HA-1, HA1c (Hospital Apprentice, 1st Class) - Equivalent to modern HN/DN
HA2c (Hospital Apprentice, 2nd Class) - Equivalent to modern HA/DA
PhM - Pharmacist's Mate, the rating title for Hospital Corps members from 1916-1948

Sources:

Navy Casualties, Deaths Due to Enemy Action 1776-1937, Casualty Branch, Bureau of Naval Personnel, 1962.
Annual Report of the Secretary of the Navy, Navy Department, 1898.
The History of the Navy Medical Department in World War II, Vol. II, Bureau of Medicine & Surgery, 1953.
Korean War Project, internet, www.koreanwar.org.
VietNam Casualty Search Page, internet, www.no-quarter.org.

World War I in April. By the end of 1918, the corps would peak at about 17,000.

Hospital Corps: Pharmacist's Mates in World War I

The massive war increase in Hospital Corps strength necessitated additional schools to train the newcomers. Hospital Corps School, Great Lakes, IL, was established in January 1913. Wartime schools were created in Minneapolis at the University of Minnesota, in New York at Columbia University, and at the Philadelphia College of Pharmacy. A school for Naval Reserve Force hospital corpsmen was set up at Boston City Hospital. Other crash-course schools for shipboard personnel were conducted at a number of other civilian hospitals. Hospital corpsmen who were needed to serve as medical department representatives on small vessels such as destroyers were trained at the Pharmacist's Mate School at Hampton Roads, VA, the forerunner of the Independent Duty Hospital Corpsman School.(26)

Hospital corpsmen were assigned to the multitude of duty types and locations needed to support a Navy involved in a world war. Naval hospitals were opened and staffed. Ships and aircraft squadrons were given medical support. At sea, the dangers of the new war were ever present. When the troop transport USS *Mount Vernon* was torpedoed by a German U-boat, Pharmacist's Mate First Class Roger Osterheld contended with over 50 casualties, over half of whom were killed.

Naval training facilities and shore establishments needed hospital corpsmen as well as did occupation forces in Haiti and other bases around the world. But World War I provided the Hospital Corps a role that would afford it some of the most gruesome and dangerous challenges it would ever face: duty with the Marine Corps.

Assignment to Marine Corps units was not completely new. Hospital corpsmen were serving with Marine occupational forces in Cuba, Haiti, and Santo Domingo at the outbreak of the war and had seen other similar service. It was the change of the Marine Corps' role to one of expeditionary forces in a large scale ground war that changed what hospital corpsmen would do. Sick call and preventive medicine were continuous roles that remained unchanged. Facing artillery, mustard gas, and machine gun fire were new experiences.

Two to four hospital corpsmen were assigned to each rifle company. A first or second class petty officer would act as the company hospital corpsman and the others as platoon hospital corpsmen. In the trenches and more fixed locations, *postes de secours* or company aid stations were established by these contingents. A battalion aid station would have from five to seven hospital corpsmen and a chief. The senior chief pharmacist's mate and six to eight more hospital corpsmen would serve at the regimental aid station.(27)

These hospital corpsmen lived and worked in arduous battle conditions. In one occurrence, a predawn mustard gas attack on the 6th Marines at Verdun in April 1918 had devastating consequences: 235 of the 250 in one company succumbed to the gas and had to be evacuated. The two company hospital corpsmen worked furiously to treat these patients despite their own gas injuries. One died and the other was permanently disabled.

Assaults on German positions offered hospital corpsmen further chances to show their commitment. Their performance in woods well known to Marines would cause the 5th regiment's commanding officer to write: "there were many heroes who wore the insignia

of the Navy Hospital Corps at the Bois de Belleau."(28)

In all, some 300 hospital corpsmen, doctors, and dentists served with the 5th Marine Regiment, the 6th Marine Regiment, and the 6th Machine Gun Battalion, assigned to the Army's 2nd Infantry Division. Their professionalism and heroism were reflected in some of the statistics they compiled. During their time in Europe, in the bloody engagements such as Meuse-Argonne and Belleau Wood, they treated over 13,000 casualties. Eighteen of their own were killed and 165 were either wounded or injured by mustard gas.

A heritage of valorous service with the Marines was born. Two hospital corpsmen received the Medal of Honor. Other decorations to hospital corpsmen included 55 Navy Crosses, 31 Army Distinguished Service Crosses, 2 Navy Distinguished Service Medals, and 237 Silver Stars. A hundred foreign personal decorations were granted to Navy hospital corpsmen, and 202 earned the right to wear the French Fourragère shoulder aiguillette permanently. Their 684 personal awards make the Hospital Corps, by one account, the most decorated American unit of World War I.(29)

Following the war there was an inevitable decrease in the strength of the armed forces. Despite the loss of hospital corpsmen, there were still missions to perform. Nicaragua was added to the list of occupational duties to which the Marines and their hospital corpsmen were assigned in 1927. Ships and naval hospitals still required Hospital Corps staff. Dedicated members of the Hospital Corps remained in the service, doing what they loved, despite the lack of advancement opportunity. In the years between the wars, time in rate from pharmacist's mate second class to pharmacist's mate first class was 8 years.(30)

In one of three such instances in World War II, a hospital corpsman performs a successful appendectomy aboard a submerged submarine in enemy waters. Pharmacist's Mate First Class Thomas Moore operates on Fireman Third Class George Platter aboard USS *Silversides* in December 1942.



Hospital Corps: Pharmacist's Mates in World War II

World War II became the period of Hospital Corps' greatest manpower, diversity of duty, and instance of sacrifice. Between 1941 and 1945, the ranks of this small organization swelled from its prewar levels of near 4,000 to over 132,000 personnel. This increase came to fulfill new responsibilities with new technologies at new duty stations. In the face of great adversity, the Hospital Corps would cement its reputation for effectiveness and bravery.

The Navy's fleet expanded to thousands of ships and the Marine Corps grew from a few regiments to six divisions. A two-ocean war produced horrific numbers of casualties. The Hospital Corps would have to grow to meet the needs of casualty collection, treatment, and convalescence. To educate the influx of new Sailors, the Hospital Corps Training School at Portsmouth, VA, was augmented by a temporary school at Naval Hospital Brooklyn, NY. The school at Great Lakes was recreated in 1942, and others were started at Farragut, ID, and Bainbridge, MD, in 1943. A separate Hospital Corps Training School was established for women at Bethesda, MD, in January 1944. Specialized schools were opened to train pharmacist's mates for independent duty and for service with the Marines. Additionally, courses were established to instruct personnel on new equipment and techniques in dozens of developing medical fields.

Shore-based duty sent Hospital Corps personnel to hospitals and dis-

pensaries in the United States and abroad. Advance base hospitals on newly captured Pacific islands formed a crucial link in the chain of evacuation from battle sites. Those facilities in Hawaii or England received casualties from their respective fronts. Stateside hospitals watched over wounded service personnel as their recuperation continued. Hospital corpsmen made the treatment of American casualties possible at each of these by providing technical support and direct patient care.

Duty on surface ships afforded hospital corpsmen numerous challenges and abundant environments in which to face them. Hospital ships required the services of personnel in much the same way as shore-based hospitals, except that those on ship were afloat and subject to attack. Other classes of vessels, such as landing ships, tank (LSTs) and patrol craft, escort and rescue (PCERs) became large floating clinic/ambulances which required additional Hospital Corps personnel.

Combatant ships and transports in the Atlantic, Pacific, and Mediterranean theaters took casualties from ships, aircraft, and submarines throughout the war, necessitating the service of well-trained hospital corpsmen. Casualties could be staggering on attacked ships. In one example, the aircraft carrier USS *Bunker Hill* sustained 392 killed and 264 wounded when it was hit by two kamikazes.(31)

Role of submarine hospital corpsmen developed into one of great importance. Hospital corpsmen treated 549 survivors of air or sea calamities, U.S. and enemy alike. In one case, three Sailors were seriously wounded, the submarine's CO wrote: "the chief pharmacist's mate is particularly commended for his quick and efficient action in caring for these three wounded shipmates...He has been recommended for promotion and the Bronze Star Medal."(32)

The most dramatic accomplishments of submarine hospital corpsmen were three who had to do surgery while submerged. Pharmacist's Mate First Class Wheeler "Johnny" Lipes performed a successful appendectomy aboard USS *Seadragon* on 11 Sept 1942. Lipes, who had been a surgical technician, used improvised instruments made from mess deck utensils and instructed assistants as the procedure went on in the officers' wardroom. PhM1c Harry Roby performed the same act on USS *Grayback* as did PhM1c Thomas Moore aboard USS *Silversides*, both in December 1942.(33)

Approximately 300 hospital corpsmen sat out all but the early days of the war when they were captured by the Japanese who invaded the Philippines. In prisoner-of-war camps and huddled in POW "hell ships," they endured malnutrition, disease, torture, and brutality. One hundred thirty-two hospital corpsmen died as prisoners during World War II, a death rate almost 20 percent higher than among other American POWs.

Hospital corpsmen served on the beaches not only in the island campaigns of the Pacific, but in Europe as well. Teams of Navy medical personnel formed aid stations with beach battalions at Sicily and Normandy, treating Army and allied wounded under fire. Hospital corpsmen ensured



Hospital corpsmen care for Marine casualties on Peleliu, 1944.

the survival of these casualties until they could reach hospitals in England.

Of all the hospital corpsmen in World War II, Fleet Marine Force personnel endured, perhaps, the most grueling side of war. As they swarmed numerous beaches in the Pacific, they became targets themselves as they braved fire to reach downed comrades. At Guadalcanal, Tarawa, Peleliu, Saipan, Tinian, Kwajalein, Iwo Jima, and Okinawa, hospital corpsmen bled and died, often in greater numbers than the Marines for whom they cared. Hospital Corps casualties in the 4th Marine Division at Iwo Jima, for example, were 38 percent.⁽³⁴⁾

Pharmacist's Mate First Class Ray Crowder made notes of his combat experiences in his diary:

Most of the men who had been wounded previously were hit again...I was hit by a piece of shrapnel in my leg but I overlooked it until later. As soon as I could get my wits together...I began to do what I could for the guys. Two of

the men were screaming with shock. Darkness had already fallen and I couldn't see what I was doing. All that I could do was to feel the blood and try to get a pressure bandage put over it to stop the bleeding.⁽³⁵⁾

Pharmacist's Mate Second Class John H. Bradley's heroism with the 28th Marines on Iwo Jima is typical of acts repeated by hospital corpsmen throughout the war. On seeing a wounded Marine, Bradley rushed to his aid through a mortar barrage and heavy machine gun fire. Although other men from his unit were willing to help him with the casualty, Bradley motioned them to stay back. Shielding the Marine with his own body, the hospital corpsman administered a unit of plasma and bandaged his wounds. Through the gunfire, he then pulled the casualty 30 yards to safety.

PhM2c Bradley was awarded the Navy Cross for his valor, but he is not usually remembered for this act. Days later, he and five Marines were cap-

tured in Joe Rosenthal's photograph of the second flag raising on Mt. Suribachi. The image was reproduced more than perhaps any photo in history. It was the theme for the Marine Corps War Memorial in Arlington, VA, and made Bradley the first U.S. Navy Sailor to appear on a postage stamp. His likeness as a dedicated American serviceman is the most famous in the Hospital Corps' history.⁽³⁶⁾

Members of the Hospital Corps treated some 150,000 combat casualties during the war. This does not include thousands of others, those plagued by disease and injured in the line of duty, who were aided by their medical shipmates. The cost of this service was high: 1,170 hospital corpsmen were killed in action and thousands more were wounded. But their valor in doing their jobs was great. Hospital corpsmen earned seven Medals of Honor, almost half of those awarded to Sailors in the war. In addition, they earned 66 Navy Crosses, 465 Silver Star Medals, and 982 Bronze Star Medals.⁽³⁷⁾

A New Hospital Corps

Massive reorganization of the armed forces took place after World War II. A new Department of Defense was established, and the Army-Navy Medical Service Corps Act removed commissioned allied health and medical administration officers from the Hospital Corps. This law also provided for a separate dental technician rating, which remained a component of the Hospital Corps until 1972.

Women in the Hospital Corps had previously been WAVES, or members of the Women's Reserve, U.S. Naval Reserve. New legislation permitted

HM2 H.A. Koch at work in the laboratory. Women entered the Hospital Corps as part of the Women's Reserve, USNR (WAVES) during World War II. Legislation in 1948 permitted women to enlist in the Regular Navy.



women to enlist in the Regular Navy, and HM1 Ruth Flora became the first hospital corpsman to do so on 12 July 1948.

Effective 2 April 1948 the Navy changed the names and insignia of the Hospital Corps. The new titles were hospital recruit, hospital apprentice, hospitalman, hospital corpsman third, second, and first class, and chief hospital corpsman. The red Geneva cross, which had marked corpsmen for 50 years, was replaced in the rating badge with the original mark of the winged caduceus. The rates of senior chief and master chief hospital corpsman were added in 1958.

Hospital Corpsmen in Korea

As part of a United Nations force, Marines were committed to the Korean peninsula when South Korea was invaded by its northern neighbor in the summer of 1950. Within the first year, hospital corpsmen had participated in the dramatic landing at Inchon and the frigid retreat from the Chosin Reservoir. By the summer of 1951, a stale-mated line of opposing forces took static positions. For the next two years, the war would be reminiscent of World War I, with bunkers, trenches, raids, and artillery fire. The slow war of attrition was nonetheless lethal. In late March 1953, 3,500 Chinese Communist Forces soldiers attacked three outposts—Reno, Vegas, and Carson—of 40 Marines and one hospital corpsman each. Out of this fighting came two Medals of Honor and numerous other decorations. In the Nevada Cities Outpost battles, most of the hospital corps-

men who were involved at the small unit level were either killed or wounded.

Although only one Marine division was involved in the war, the Hospital Corps lost 108 killed in action. Disproportionate to their numbers was their heroism. In Korea, hospital corpsmen earned 281 Bronze Star Medals, 113 Silver Star Medals, and 23 Navy Crosses. All five Medals of Honor were awarded to Navy hospital corpsmen serving with the Marines.

Hospital Corpsmen in Vietnam

American military commitment in Southeast Asia grew in the decades following World War II. As early as 1959, a few hospital corpsmen provided medical support for U.S. military personnel as part of the American Dispensary at the U.S. Embassy. Four years later, in 1963, Navy Station Hospital Saigon was created. Ninety hospital corpsmen would staff the facility, which provided care for U.S. and allied (Australian, New Zealand, Filipino, and South Korean) military, as well as South Vietnamese civilians.

These medical personnel conducted routine medical care and treated the victims of combat and terrorist actions until the hospital was transferred to the Army in 1966.(38)

A new hospital was constructed in 1965 at Naval Support Activity Da Nang. A staff of 485 hospital corpsmen worked with doctors and nurses to care for combat casualties. The hospital, which was designed primarily to care for Marines in the I Corps sector, treated 23,467 patients in 1968 alone. Although not on the front lines, the hospital corpsmen here were subjected to routine rocket and mortar attacks.(39)

Hospital corpsmen were assigned aboard ships of various kinds, providing off-shore medical support to U.S. forces. The largest commitment here was on the hospital ships *USS Repose* and *USS Sanctuary*. Some 200 hospital corpsmen, representing the gamut of technical specialties, worked on each ship. Teams of 20 hospital corpsmen served on LPH class amphibious ships. Others supported the riverine force on APB class base ships.(40)



Left: HM3 Don Meloan cares for a Marine with multiple wounds in Korea. All five enlisted Navy personnel to receive the Medal of Honor for the Korean War were hospital corpsmen. Below: HM1 C.A. Jimerfield ready to treat casualties in Vietnam. Among his supplies is a bandoleer packed with battle dressings.



U.S. State Department initiatives and the Medical Civic Action Program (MEDCAP) provided medical support for Vietnamese civilians. Beyond routine aid and treatment, the hospital corpsmen working through these programs provided guidance in sanitation and preventive medicine throughout South Vietnam.(41)

By far the Hospital Corps' largest contribution in Vietnam was with Marine Corps units. Starting with the 50 who landed with the Marines at Da Nang in 1965, the enlisted medical component would grow to 2,700 hospital corpsmen assigned to 1st and 3rd Marine Divisions, 1st Marine Air Wing,

and other combat support units. Two medical battalions and two hospital companies operated field hospitals, collecting and clearing units, and dispensaries which treated the flow of combat casualties from the field. Closer support was provided at the battalion aid station (BAS) level, where casualties could be stabilized before evacuation to more definitive care. The BAS was often bypassed because of the exceptional medical evacuation capabilities of helicopter medical evacuation (medevac).

The most dangerous role of the hospital corpsman in Vietnam was in the field. Special units, such as Navy

SEAL teams and Marine reconnaissance units took medical Sailors with them, as did the artillery, air, and infantry elements of the Marine Corps. Most of the 53 hospital corpsmen assigned to an infantry battalion served with rifle companies, one or two men per platoon of about 40. These Sailors patrolled with their Marines, risked the same dangers, and rendered the aid that saved the lives of thousands.(42)

Contributions of hospital corpsmen in Vietnam were noteworthy, as they cared for over 70,000 Navy and Marine Corps combat casualties and countless military and civilian sick call patients. Their valor was great.

DECORATIONS FOR VALOR AWARDED TO HOSPITAL CORPSMEN

Boxer Rebellion 1900:	
Medal of Honor.....	1
USS <i>Bennington</i> 1905:	
Medal of Honor.....	1
Philippine Operations 1911:	
Medal of Honor.....	1
Vera Cruz, Mexico 1914:	
Medal of Honor.....	1
World War I:	
Medal of Honor.....	2
Navy Cross	55
Distinguished Service Cross.....	31
Silver Star Medal.....	237
Nicaragua 1928:	
Navy Cross.....	1

World War II:	
Medal of Honor.....	7
Navy Cross	66
Silver Star Medal.....	465
Bronze Star Medal.....	982
Korea:	
Medal of Honor.....	5
Navy Cross.....	23
Silver Star Medal.....	113
Bronze Star Medal.....	281
Vietnam:	
Medal of Honor.....	4
Navy Cross.....	30
Silver Star Medal.....	127
Bronze Star Medal.....	290
Persian Gulf War:	
Bronze Star Medal.....	1

Source: BUMED Archives. Compiled by HMCS(FMF) Mark T. Hacala, USNR

HM3 Donald E. Ballard, HM3 Wayne M. Caron, and HM2 David R. Ray earned the Medal of Honor for heroism. HM3 Robert R. Ingram received his Medal of Honor for Vietnam in 1998. Additionally, 30 hospital corpsmen received the Navy Cross, 127 the Silver Star Medal, and 290 the Bronze Star Medal. The names of 638 hospital corpsmen were killed in action in Vietnam, more than in any other war except World War II. Too many more—4,563—would earn the Purple Heart.(43)

HM2 Chris Pyle wrote the following letter home before assignment with 1st Marine Division in Vietnam.

Many people have died to save another. The Navy Corpsman has had more honors bestowed on him than any other group. My life has but one meaning, to save or help someone. Soon I will be going over to Vietnam. I have my fears and beliefs, but they lay hidden under my emotions. That's why God has made me so. Someday I will see before me a wounded marine. I will think of all kinds of things, but my training has prepared me for this moment. I really doubt if I will be a hero, but to that Marine I will be God. I am hoping that no one will die while I am helping him; if so, some of myself will die with him. Love for fellow man is great in my book. It's true they make me mad at times but no matter who it is, if he's wounded in the middle of a rice paddy, you can bet your bottom dollar that whatever God gave me for power, I will try until my life is taken to help save him, and any other.

Five months later, on 28 May 1969, HM2 Pyle was killed in action.(44)

Hospital Corpsmen in Beirut

A different part of the world would beckon hospital corpsmen in the 1980's, southwest Asia. The objective was a "peacekeeping" mission in Beirut, Lebanon, in which U.S. forces participated with those of France, Italy, and Great Britain in a Multinational Force. Here, hospital corpsmen from the ships of a Mediterranean Amphibious Ready Group and a Marine Amphibious Unit were assigned to stop a bloody, 8-year-old factional civil war. By the end of August 1983, the peacekeepers had



Photo from author's collection

Left to right: HN Jesse W. Beamon, HM3 Joseph P. Milano, HM2 Michael H. Johnson, and HM2 Marion E. Kees inside the supply room of Battalion Aid Station 1/8 Marines, Beirut, Lebanon. Shortly after this photo was taken, all four were killed in the truck bomb attack on Battalion Landing Team 1/8's headquarters on 23 Oct 1983. Eleven other hospital corpsmen and the battalion surgeon were also killed in the attack, which claimed a total of 241 American lives.

become targets and responded in a ground war that was all but unknown back in the United States.

Firefights at isolated outposts soon produced casualties, and hospital corpsmen responded under fire to treat their wounded Marines. When a mortar round hit one of the Marine positions, one hospital corpsman, HN Victor Oglesby, found himself with five wounded Marines, his platoon sergeant dead, and his platoon commander barely alive. Two months later, on 23 October, a uniformed suicide truck bomber attacked the headquarters of 1st Battalion, 8th Marines. The truck bomb unleashed the largest nonnuclear blast ever detonated and killed 241 Americans. Almost the entire battalion aid station—15 hospital corpsmen and the battalion surgeon—were killed. The casualty count for the Hospital Corps would be the next costly after World War I. One of the three hospital corpsmen who survived the blast, HM3 Donald Howell, tended to wounded Marines while trapped in the rubble and wounded himself. The relief unit for

the 24th Marine Amphibious Unit would not arrive in Lebanon until they had invaded the small Caribbean nation of Grenada.

Hospital Corpsmen in the Persian Gulf War

The 1990-91 Iraqi invasion of Kuwait gained a strong response from the United States and the world. Preparations were made to drive the Iraqi Army out of the tiny country, and corpsmen were readied to respond to the needs of their shipmates. Hospital corpsmen around the globe reacted, as their ships, stations, and Marines deployed or prepared to receive casualties. In fact, the first Navy casualty of the war was a hospital corpsman. Of the vast number of naval reservists called to active duty, the largest single group activated was hospital corpsmen. Of an inventory of just over 12,000 hospital corpsmen in the Naval Reserve, 6,739 were recalled to active duty. The largest group of them, 4,617, served at medical treatment facilities and casualty receiving centers, 1,142 went to Marine Corps

units, 841 to Fleet Hospitals 6 and 15, and 471 were assigned to the hospital ships *Mercy* and *Comfort*. (45)

Hospital Corpsmen in Somalia

U.S. forces would again try to bring stability to a troubled land: Somalia. Hospital corpsmen there faced both bullets and the needs of a starving populace. One, HM3 Timothy E. Quinn, wrote a letter describing his experiences in February 1993: "I was on a foot patrol that got pinned down by automatic weapons fire, and here I am tucked up against a tree trying to get small..." He continued, "I go out to orphanages and do simple sick call and such...the people there tell us that food is now plentiful, and that no one is dying of hunger anymore, but now the medical problems are much more apparent."

Hospital Corpsmen in 1998

In its first century, the Hospital Corps has compiled a truly honorable legacy of valor and sacrifice. In addition to the wars and conflicts recounted here, hospital corpsmen have responded to natural disasters, military accidents, and other peacetime emergencies. Moreover, they have maintained the regular health of their Sailors and Marines, giving immunizations, conducting preventive medicine efforts, and holding sick call. Today, the 23,000 regular and 3,000 reserve members of the Navy Hospital Corps continue to

serve around the globe. They are assigned to naval hospitals and clinics, to surface ships and submarines. They fly search and rescue missions and deploy with Seabees. They maintain constant battle readiness with Marine Corps units and SEAL teams.

Hospital corpsmen have always had the job of maintaining the health of their shipmates. Their innumerable instances of heroism, consciously exposing themselves to danger to save lives, are not spectacular because they were required to act. The century of Hospital Corps bravery is exceptional because it was not required.

References

1. *Rules for the Regulation of the Navy of the United Colonies of North America of 1775*. Washington, DC: Naval Historical Foundation; 1944:5.
2. Holden J. History of the Hospital Corps of the United States Navy. *Hospital Corps Handbook*. Washington, DC: Bureau of Medicine and Surgery; 1923:1. Holden's brief history has been the basis for most of the concise histories distributed to hospital corpsmen.
3. Ibid., Log of the Hospital Corps, highlight on the 'Ancaducros.' *Hosp Corps Q*. April-May-June 1948;(21)2:24.
4. Holden, p 1.
5. Ibid.
6. Langley S. *A History of Medicine in the Early U.S. Navy*. Baltimore, MD; 1995:47.
7. Ibid., p 2.
8. Melville H. *White Jacket*. Evanston and Chicago, IL: Northwestern University Press and the Newberry Library; 1970:256, 326-327.
9. Ibid.
10. Hospital Corps, U.S. Navy. *Hosp Corps Q*. April-May-June 1948;21(2):2.
11. Riske M. *United States Naval Hospital Ships*. Washington, DC: Naval Historical Foundation Publication, Series II, Number 18, Spring 1973: 2-3.
12. The Diary of Private Charles Brother. *Civil War Naval Chronology, Part VI—Special Studies and Cumulative Index*. Washington, DC: Naval History Division, Office of the Chief of Naval Operations, Navy Department; 1965:83.
13. Hospital Corps, U.S. Navy, pp 2-3.
14. Holden, p 1.
15. Shaffer C. Looking backward fifty years. *Hosp Corps Q*. April-May-June 1948;21(2):9-13.
16. Ibid.
17. Ibid., Stacey J. *U.S. Navy Rating Badges, Specialty Marks, and Distinguishing Marks, 1885-1982*. Ft. Washington, MD: published by the author; 1982.
18. Ibid.
19. Ibid.
20. Hospital Corps, U.S. Navy, p 3.
21. *Report of the Surgeon-General, U.S. Navy, Chief of the Bureau of Medicine and Surgery, to the Secretary of the Navy*. Washington, DC: Government Printing Office; 1897:16.1.
22. Hospital Corps, U.S. Navy, pp 4-5.
23. Dixon B. The old school. *Hosp Corps Q*. July 1943;16(3):161-177. Development of Service Instruction. *Hosp Corps Q*. April-May-June 1948; 21(2):32-35.
24. Log of the Hospital Corps, highlight on the 'Ancaducros,' pp 24-25. Dixon, pp 161-177.
25. Log of the Hospital Corps, highlight on the 'Ancaducros,' pp 24-25.
26. Ibid.
27. Strott, GG. *Medical Department of the United States Navy with the Army and Marine Corps in France in World War I*, NAVMED 1197. Washington, DC: Bureau of Medicine and Surgery, U.S. Navy Department. June 1947:23-25.
28. Strott, pp 36-37, 55.
29. Strott, pp 170, 252. Log of the Hospital Corps, highlight on the 'Ancaducros,' p 24.
30. Log of the Hospital Corps, highlight on the 'Ancaducros,' p 25.
31. *History of the Medical Department of the United States Navy in World War II*. Washington, DC: Government Printing Office; 1953:108.
32. Ibid., p 45.
33. Herman J. *Battle Station Sick Bay*. Annapolis, MD: Naval Institute Press; 1997:120.
34. *History of the Medical Department of the United States Navy in World War II*, p 95.
35. Hacala M. The Marines' Few Good Men: FMF Hospital Corpsmen. FMF Grunt Corpsmen Association Newsletter.
36. Navy Cross citation, PhM2c John H. Bradley. Chief of Naval Operations, Awards and Special Projects Branch, Washington, DC.
37. BUMED Archives. *Casualties: U.S. Navy and Marine Corps Killed and Wounded in Wars, Conflicts and Hostile Incidents*, Naval Historical Center Home Page.
38. McClerndon FO Jr. Doctors and dentists, nurses and corpsmen in Vietnam. *Nav Rev*, 1970. Reprinted in Uhlig F Jr, ed. *Vietnam: The Naval Story*. Annapolis, MD: Naval Institute Press; 1986:254-256.
39. Ibid., pp 257-258.
40. Ibid., pp 260-262.
41. Ibid., pp 262-264.
42. Ibid., pp 259-260.
43. Naval Historical Center Home Page.
44. The ideas of a corpsman. *Nav Med*. June 1971;57(6):9.
45. Chaloupka M, Blicke R. Operation Desert Shield/Storm: reconstruct of Naval Reserve call-up. *Nav War College Rev*. March 1993;96(3):5-16. □

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Correction

An error was discovered in the March-April article, "U.S. Navy Dental Technicians: Fifty Years of Service." DN Manuel Bernal and DT3 Richard Fly were attached to the 24th MAU Service Support Group in Beirut, Lebanon, at the time of the 1983 Marine headquarters bombing. DT2 Paul Dziadon was assigned to USS *Iwo Jima* and came ashore to assist in rescue operations. DT2 Frank McDurman and DT2 Robert Skinner were assigned to 22nd MAU Service Support Group, the unit which participated in the invasion of Grenada and subsequently relieved the forces in Beirut. Thanks to DTCS(SW/FMF) Robert Skinner and DTCM(SW) Paul Dziadon for providing corrected information.

In Memoriam

RADM William M. Lukash, MC (Ret.), chief presidential physician during the Ford and Carter administrations, died of a heart ailment on 3 Feb 1998 at a convalescent home and care facility in Del Mar, CA. He was 66.

Dr. Lukash was born in Detroit, MI, on 19 Mar 1931. He graduated from St. Francis Xavier High School, Ecorse, MI, and received a B.S. degree in psychology from Michigan State College in 1952, and his M.D. degree from the University of Michigan in 1956. In December 1954 he was commissioned lieutenant (junior grade) in the Medical Corps of the Naval Reserve. He subsequently advanced to captain in 1967, having transferred from the Naval Reserve to the regular Navy in 1959. His selection for rear admiral was approved by the President in 1973.

Dr. Lukash reported for active duty in July 1957 as medical officer on board USNS *General M.M. Patrick*, operating under the Military Sea Transportation Service. He detached from that transport in September 1959 and then served his residency in internal medicine at Naval Hospital Great Lakes, IL. In 1962 he



joined the staff (internal medicine) at Naval Hospital Charleston, SC. From 1964 to 1966 he served on the staff (gastroenterology) at Naval Hospital Philadelphia, PA, and had training at the University of Pennsylvania. In July 1966 Dr. Lukash became assistant physician at the White House in the Johnson administration and chief of the gastroenterology department at National Naval Medical Center, Bethesda, MD. In 1973

he became chief of gastroenterology at NNMCC while continuing to serve as White House physician.

Following his retirement from the Navy, RADM Lukash was a volunteer at D.C. Village, a public home for the elderly. From the early 1980's until 1990 he was medical director of preventive medicine at the Scripps Clinic and Research Foundation in Solana Beach, CA.

RADM Lukash held the Legion of Merit, the Vietnam Service Medal with bronze star, and the National Defense Service Medal. He was also a fellow of the American College of Physicians and the American College of Gastroenterology.

Naval Medical Research and Development Command Highlights

●Navy-Army: Joint Military Dental Research

The Army Dental Research Detachment (USADRD) recently completed the move from the Walter Reed Army Medical Center, Washington, DC, to collocate with the Naval Dental Research Institute (NDRI) at the Great Lakes Training Station, IL, creating one of the largest dental research organizations in the United States. The focus of the Army and Navy team is improving preventive technologies, developing treatments for oral and maxillofacial casualties during deployment to prevent evacuations, and improving forward management of oral and maxillofacial trauma. NDRI research efforts are aimed at prevention, detection, and interceptions of dental emergencies. USADRD research is directed at the prevention and treatment of field dental emergencies and combat trauma. Field logistics is one area of cooperative research with two current projects under way. USADRD has developed a portable dental field unit with a dramatically reduced power requirement. Dental handpieces are electric, reducing the need for compressed air from 40 liters per minute to 23 millimeters per minute. The air tank can even be refilled with a bicycle pump. The batteries are recharged with a notebook-sized solar panel. As a complement to this unit, the Navy will begin working on a spring-powered, wind-up amalgam triturator to mix filing materials. Another project is NDRI's interactive CD-ROM DDS/DMD system that provides Army medics and Navy independent duty corpsmen with a mobile decision support system, and includes video clips of procedures, oral pathology slides, and treatment recommendations.

●Navy Scientists Discover Positive Personality Changes During Basic Training

Military basic training is a major transition period for most recruits, and it occurs at a time when the typical 17- to 20-year-old recruit is in an important personality

development phase. Attitudes and behaviors instilled during this transition from civilian to Sailor or Marine may influence the individual's behavior during military service and in civilian society after leaving the service. Given that more than 100,000 young people go through military basic training every year (even with recent downsizing trends for the military services), any effect to basic training on personality development has substantial implications for both the military and society. Researchers at the Naval Health Research Center, San Diego, CA, in collaboration with the University of Minnesota, assessed the impact of basic training on personality. The study showed that basic training changes personality in a positive direction. Graduating Navy recruits are less prone to negative emotions, such as depression and anger, and less susceptible to stress. Graduating recruits are more conscientious, more likely to set high standards, and more likely to strive for high achievement levels. In addition, graduating recruits are more organized when attacking tasks and have greater persistence in the face of difficulties. Other research linking personality to job performance and citizenship in military and civilian populations indicates that the personality attributes that change the most during basic training are precisely those which will contribute most to improving job performance and lowering the risk of delinquent behaviors (e.g., drug use, absenteeism, etc.). After military service, the personality effects of basic training should make the servicemembers better, more productive citizens.

For more information on these and other research efforts contact Doris M. Ryan, Deputy Director, External Relations, at DSN 295-0815, Commercial 301-295-0815, E-mail ryand@mail-gw.nmrhc.nmcc.navy.mil, or FAX 301-295-4033.

For more information on the Naval Medical Research and Development Command contact the homepage at <http://www.dmsomil/NMRDC/>

Navy Medicine 1946



BUMED Archives

Recruits receive inoculations before graduation from recruit training, Bainbridge, MD.

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